

# Claims

- [c1] 1. A sieve for separating grain from chaff in a combine harvester, said sieve comprising:  
a frame adapted for attachment to the combine harvester, said frame having a front end and a rear end;  
a plurality of longitudinal planks each pivotally combined with the frame between the front end and the rear end so as to pivot about their longitudinal axis, said planks having a top side and a bottom side;  
a plurality of sieve holes extending through the planks for separating grain from chaff; and  
a pendulum adapted to be combined with the combine harvester and operatively engaged with the planks, said pendulum for pivoting the planks on their longitudinal pivot axes as the pendulum changes angular position relative to the combine and the frame.
- [c2] 2. The sieve of Claim 1 wherein the planks are combined with the frame using pivot pins.
- [c3] 3. The sieve of Claim 1 further comprising longitudinal dividers combined with the frame and located between each plank, said dividers being positioned so as to prevent chaff from falling between the planks.

- [c4] 4. The sieve of Claim 3 wherein the dividers have a rectangular portion extending upward away from the sieve frame and a cylindrical portion on top of the rectangular portion; and  
a seal extending over the cylindrical portion connected to adjacent planks so as to prevent chaff from falling between the planks as the planks pivot.
- [c5] 5. The sieve of Claim 2 further comprising levers combined with the planks at their pivot pins;  
at least one rod combined with the levers; and  
wherein the pendulum is operatively connected with the planks through the rods and levers.
- [c6] 6. The sieve of Claim 1 wherein the sieve holes are an oblong shape; and  
wherein the sieve holes are angled toward the rear of the sieve frame on the plank's top side so as to help direct the chaff toward the rear of the sieve frame.
- [c7] 7. The sieve of Claim 1 comprising four planks.
- [c8] 8. The sieve of Claim 1 comprising five planks.
- [c9] 9. The sieve of Claim 1 wherein the pendulum is combined with a leash which regulates the distance the pendulum can travel.

[c10] 10. A method for separating grain from chaff in a combine harvester having a leveling sieve with a plurality of longitudinal sieve planks, holes in the sieve planks for separating the grain, and a weighted pendulum combined with the combine and the sieve planks through rods and levers, said method comprising the steps of: harvesting a crop using the combine harvester; driving the harvester from level ground onto a hillside so that the harvester is laterally inclined; moving the weighted pendulum relative to the combine because of the lateral inclination of the combine; using the movement of the weighted pendulum to pivot the sieve planks so that they remain level relative to the horizon as the combine is laterally inclined; and harvesting and separating the grain from the chaff as the planks are pivoted relative to the combine, yet level relative to the horizon.